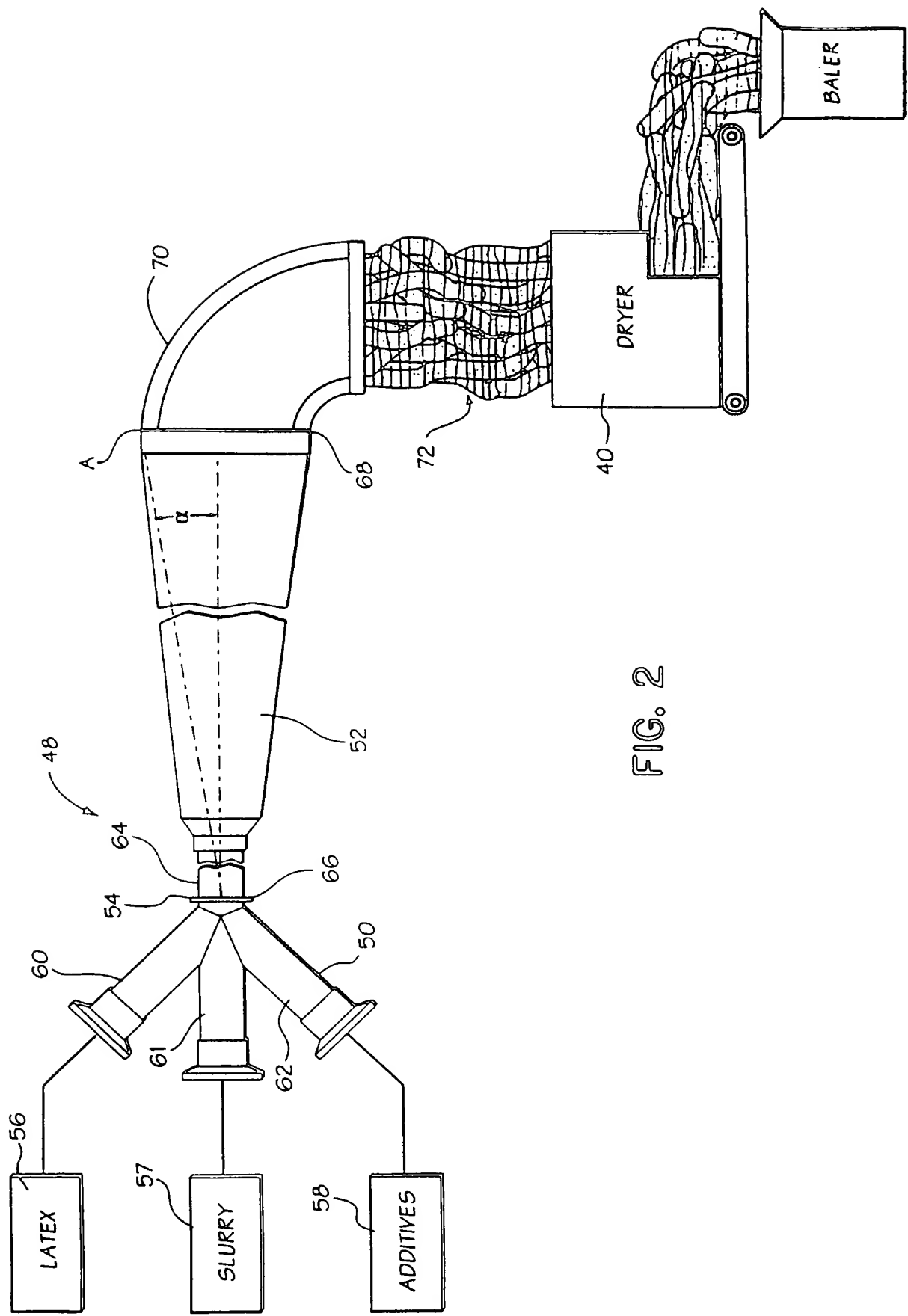


FIG. 1



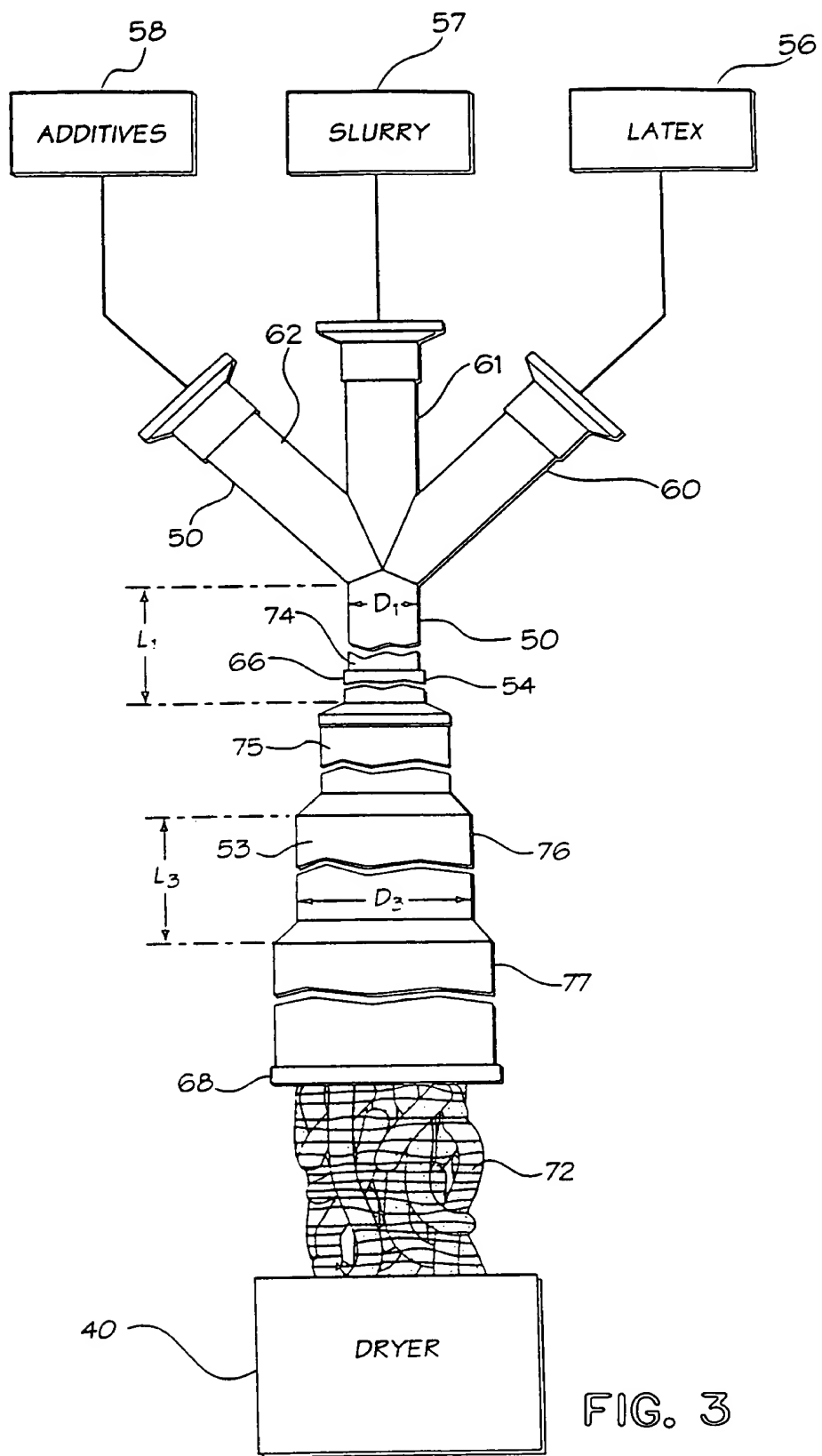
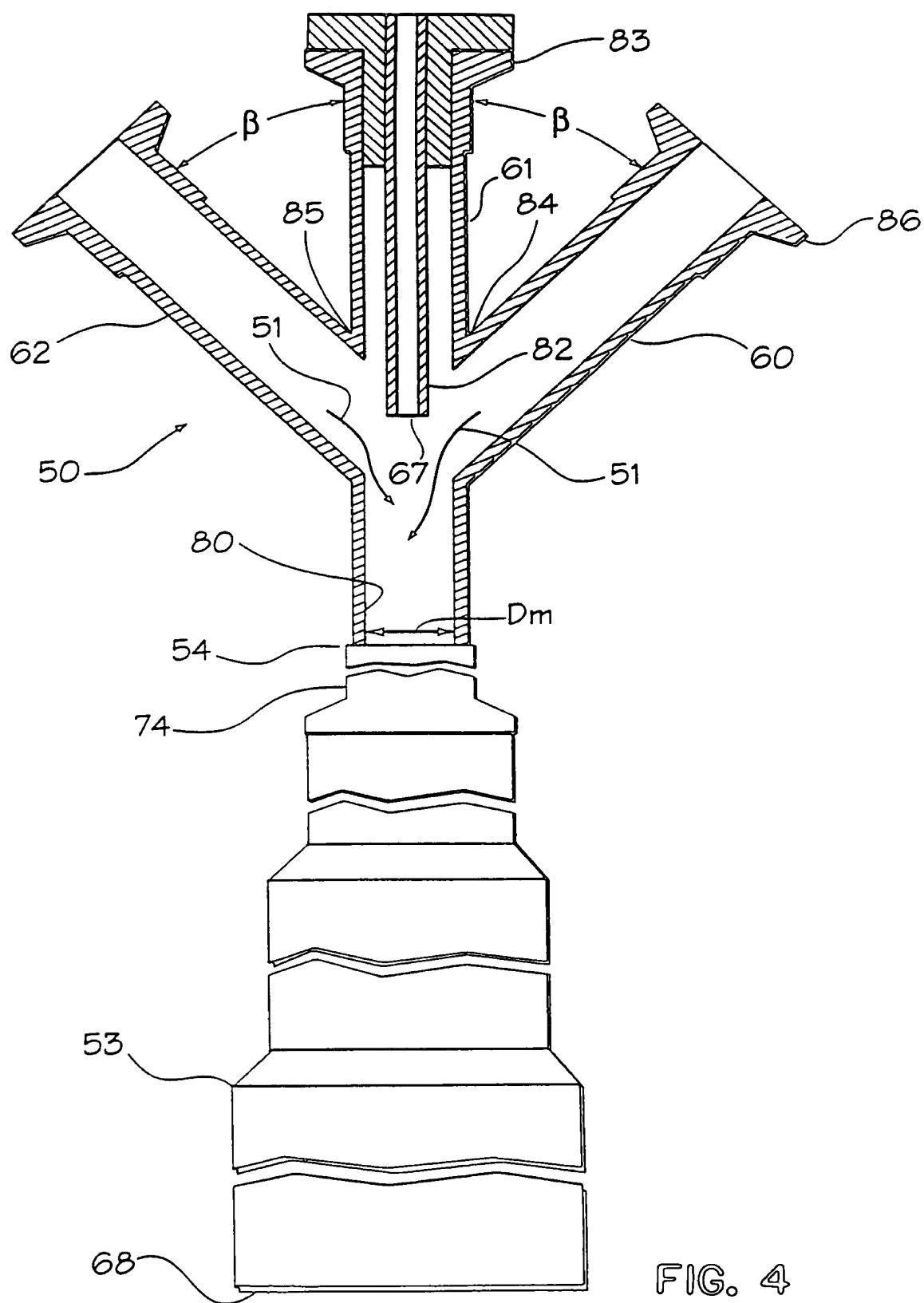


FIG. 3



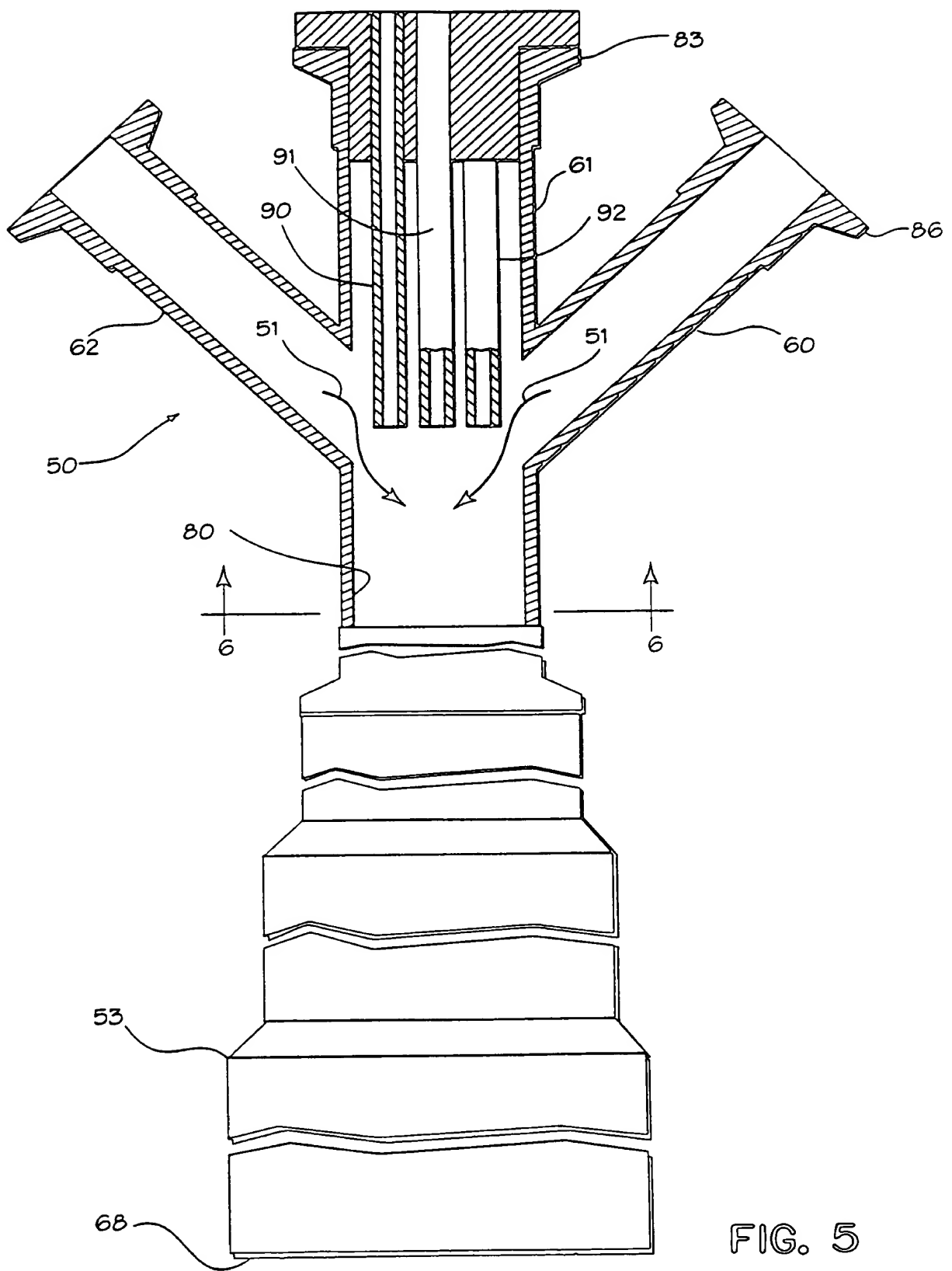


FIG. 5

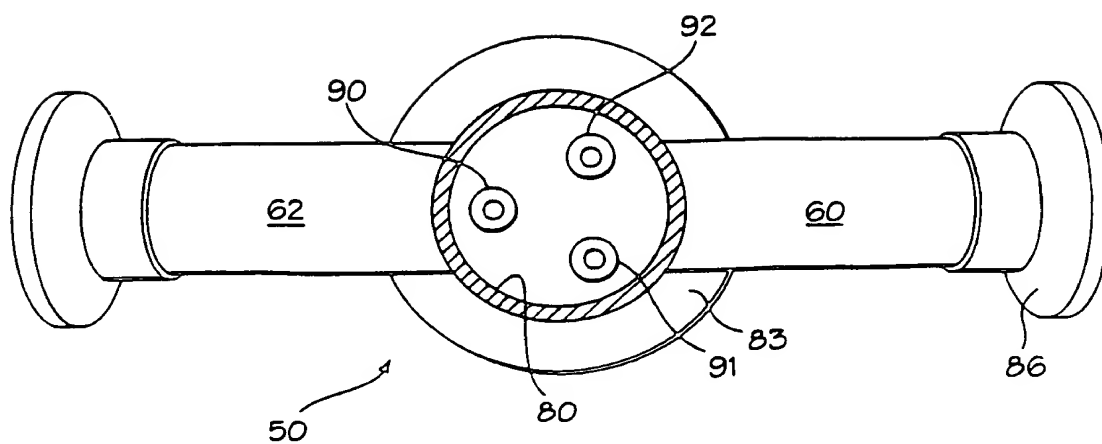


FIG. 6

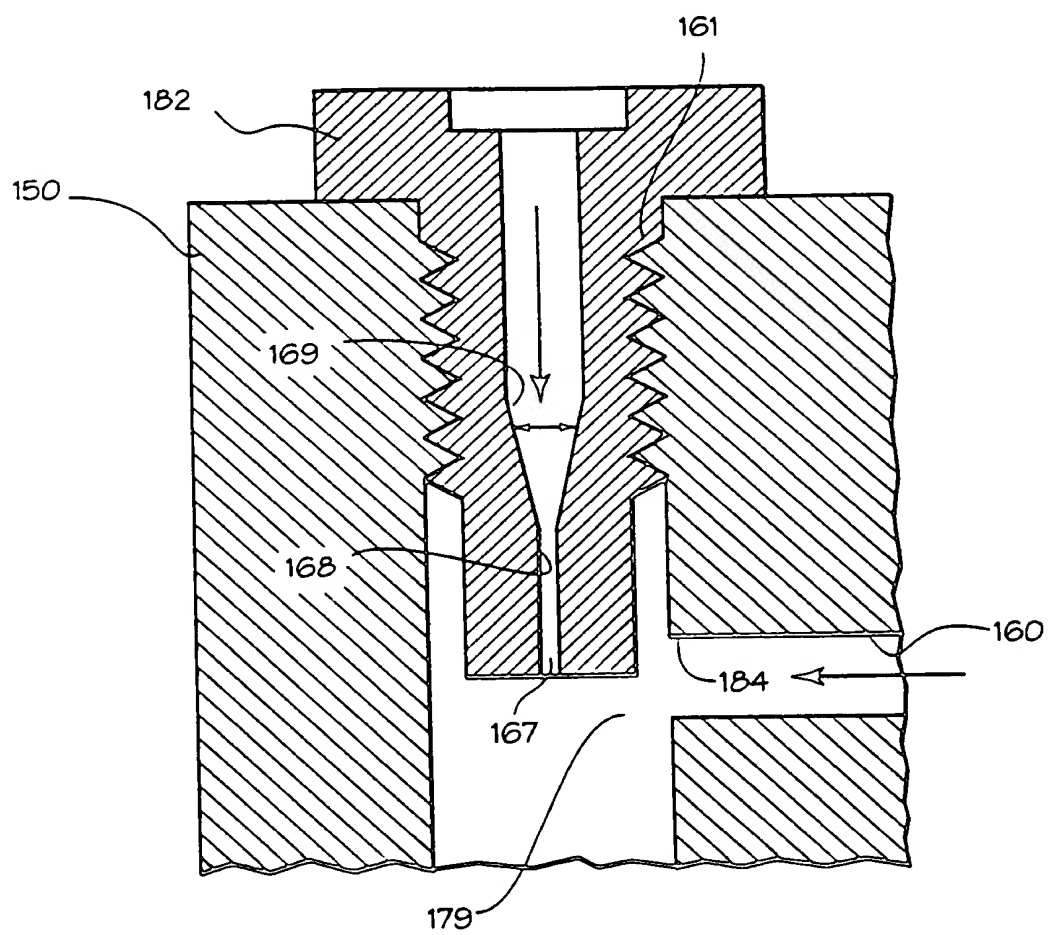


FIG. 7

FIG. 8

Carbon Black Morphology Map

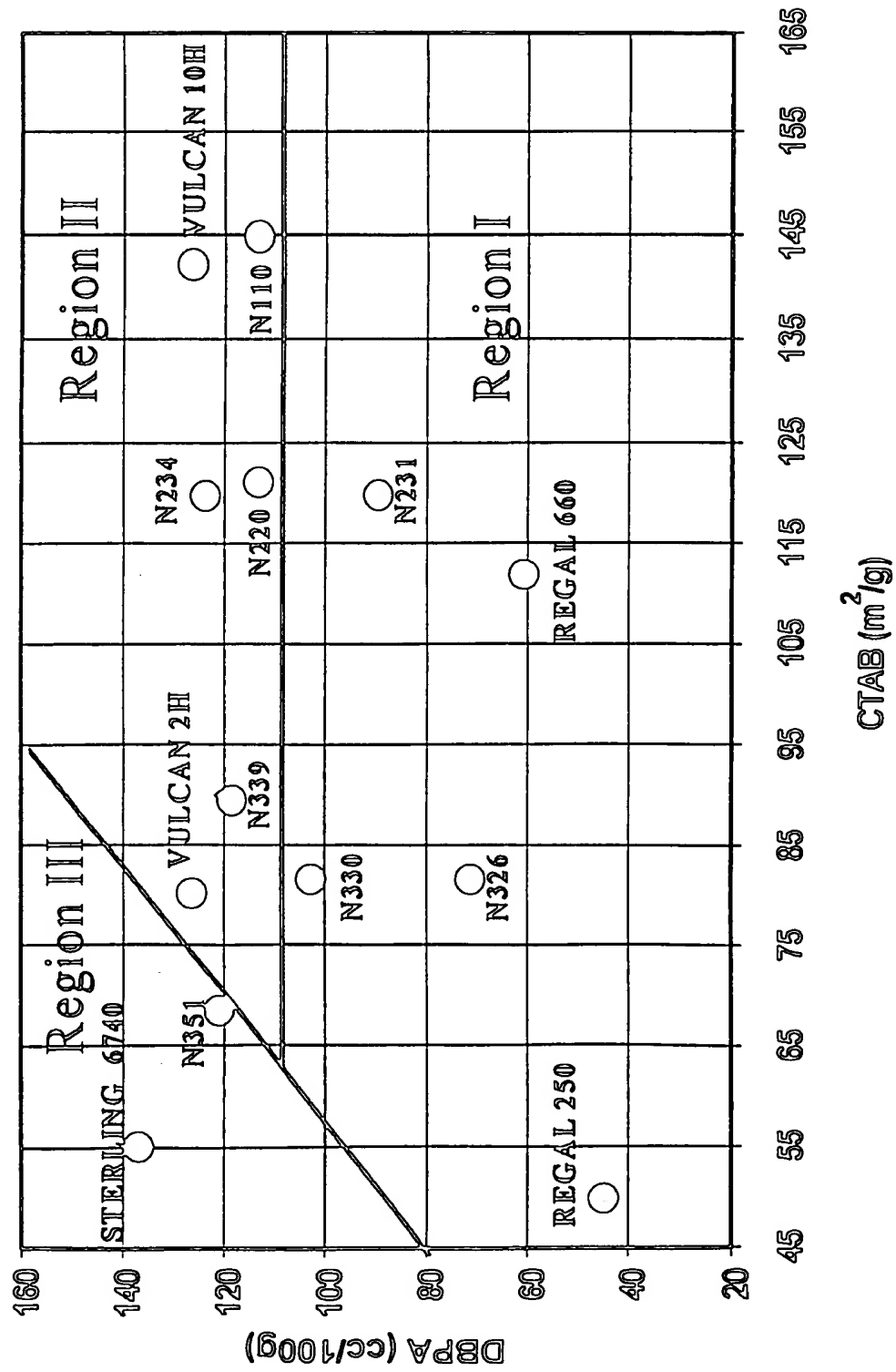
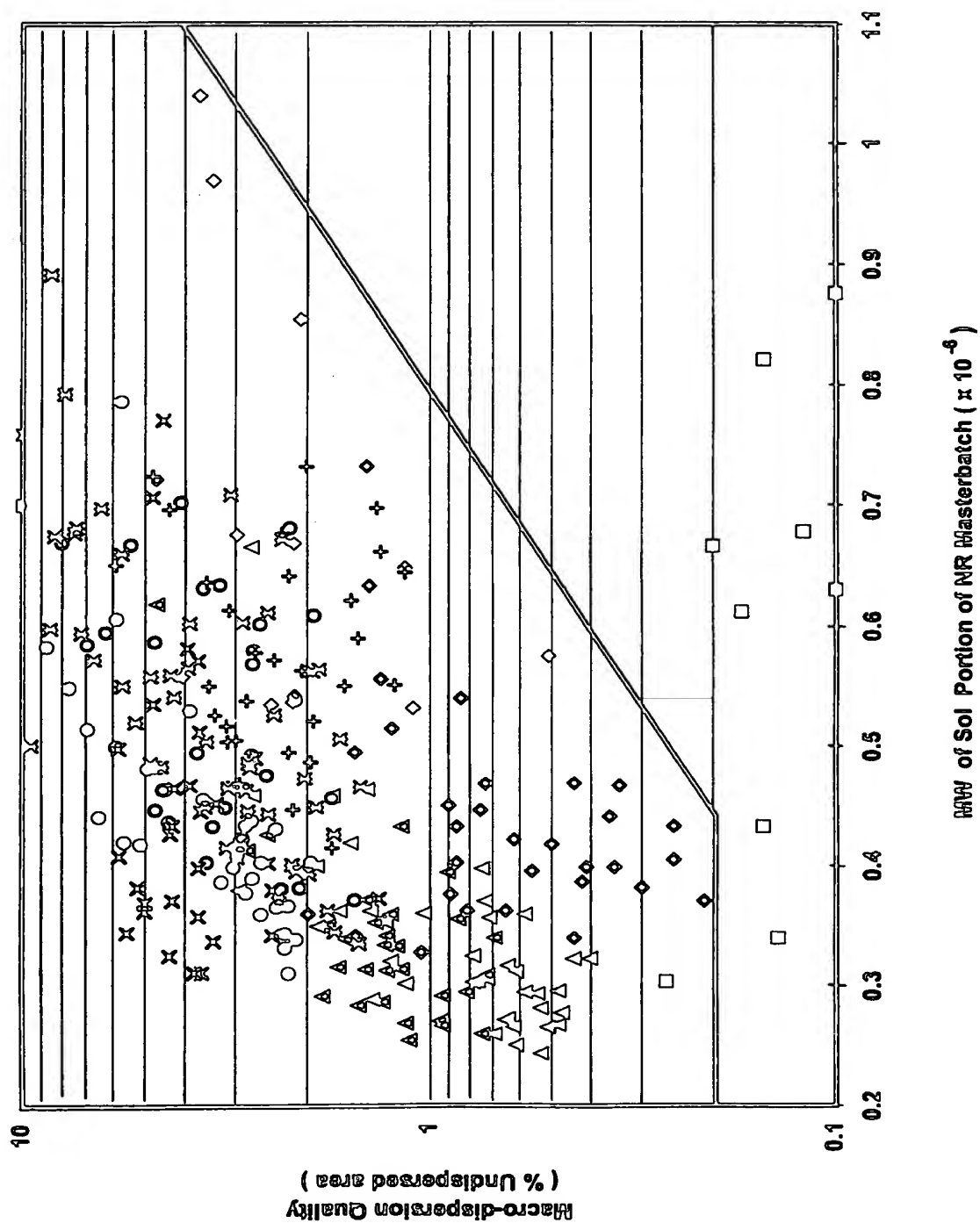


FIG. 9 Dispersion Quality and  $MW_{sol}$  of NR Masterbatches





**FIG. 10 Dispersion Quality and  $MW_{sol}$  of NR Masterbatches  
(Region I)**

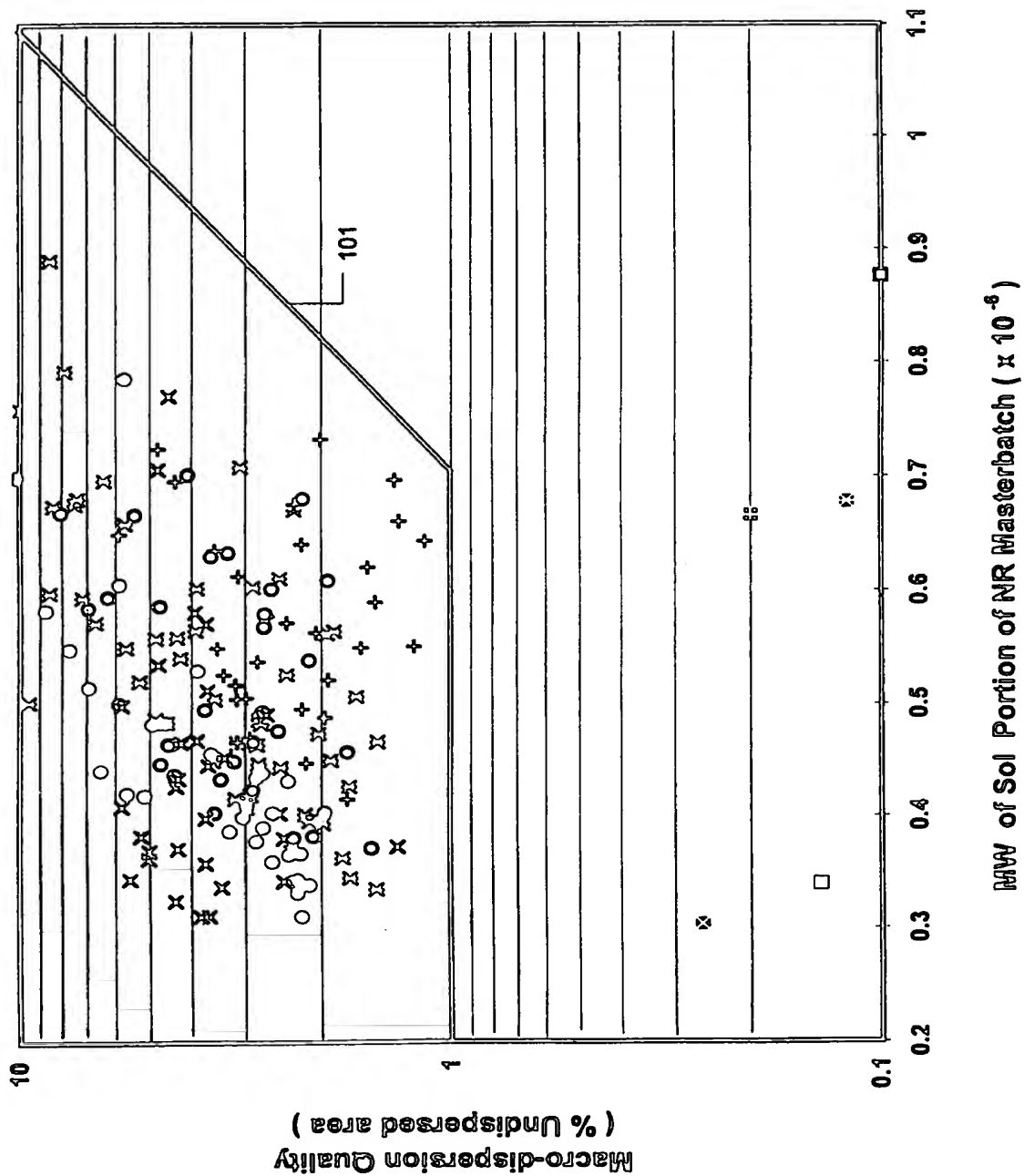


FIG. II  
Dispersion Quality and  $MW_{sol}$  of NR Masterbatches  
(Region II)

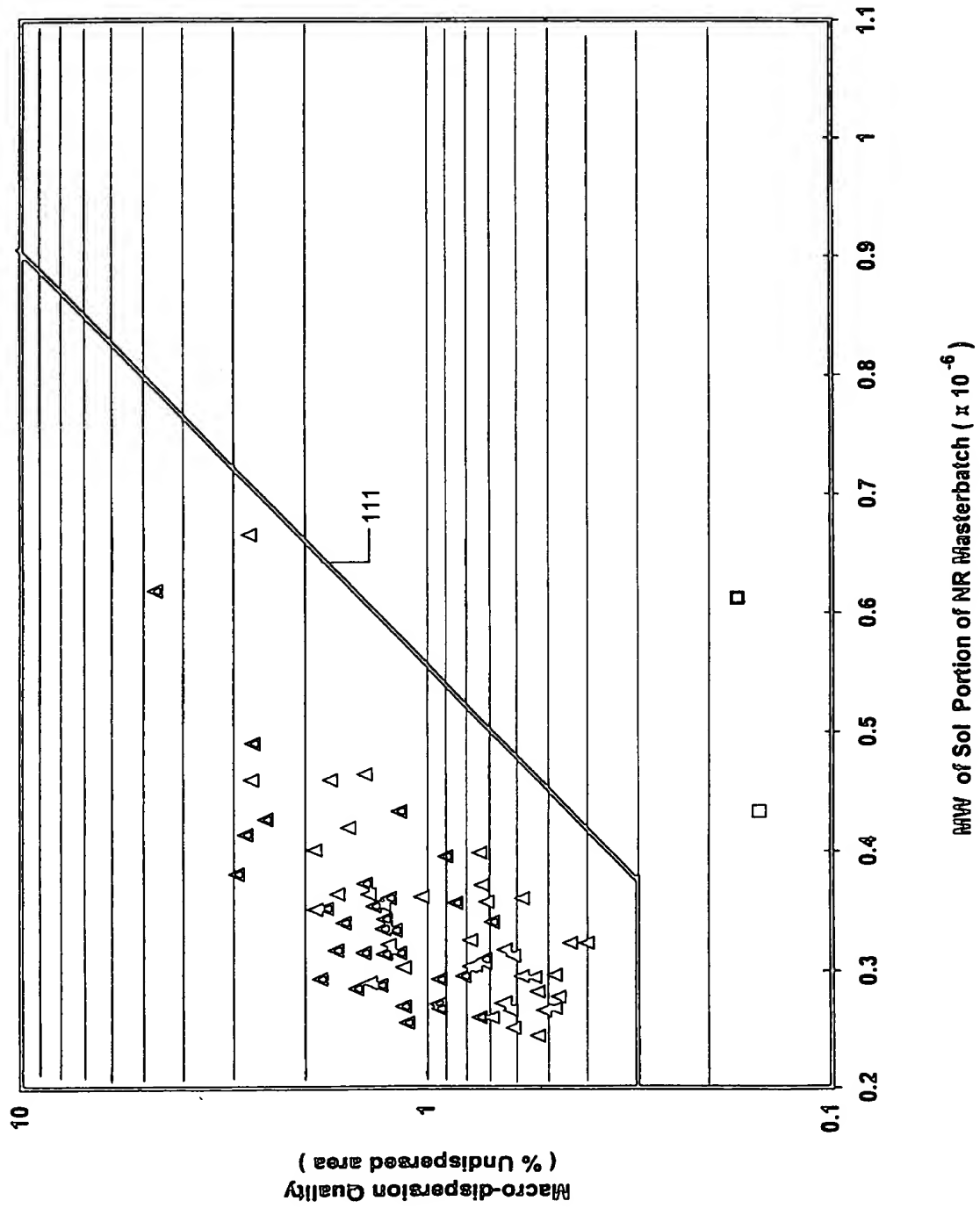
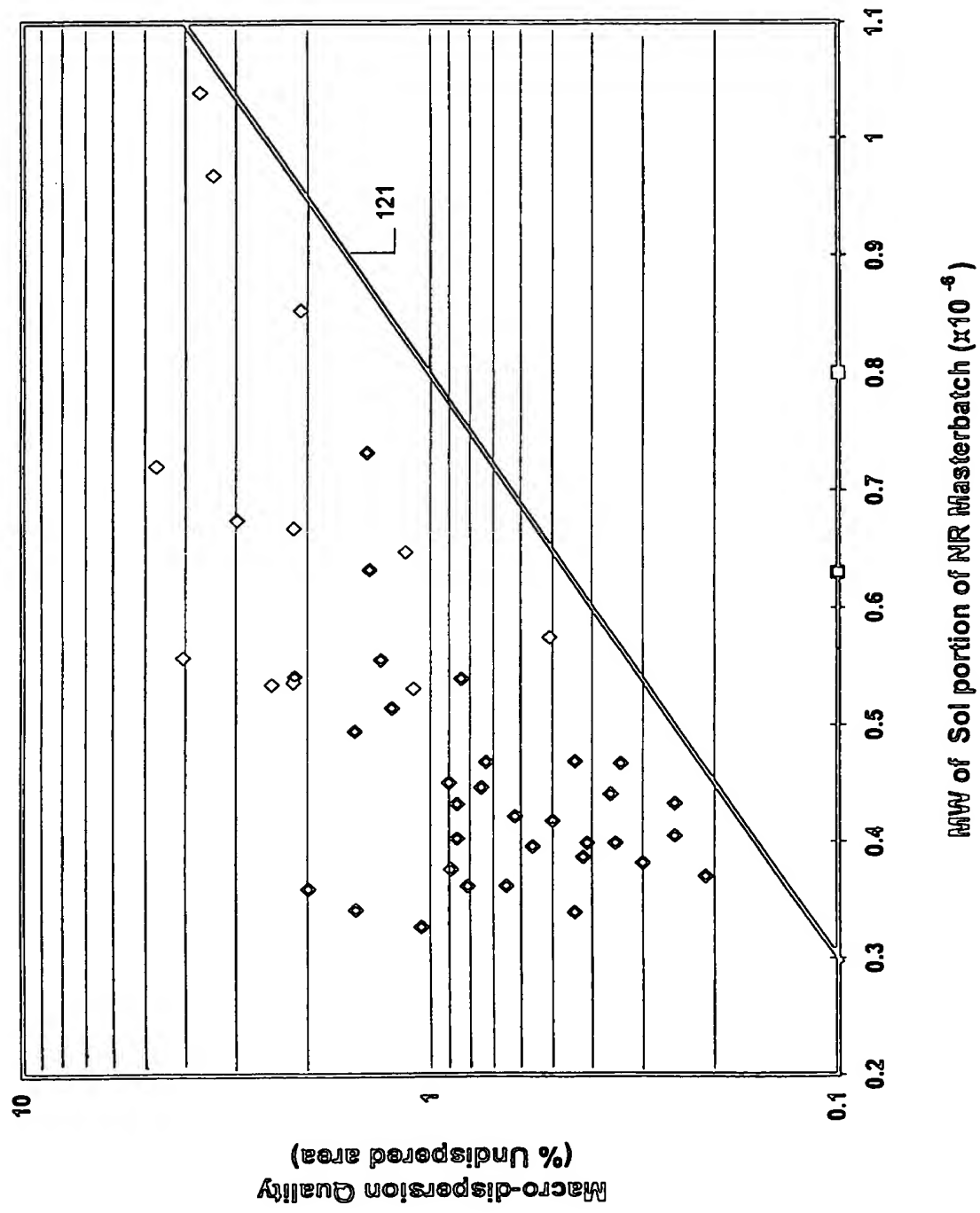
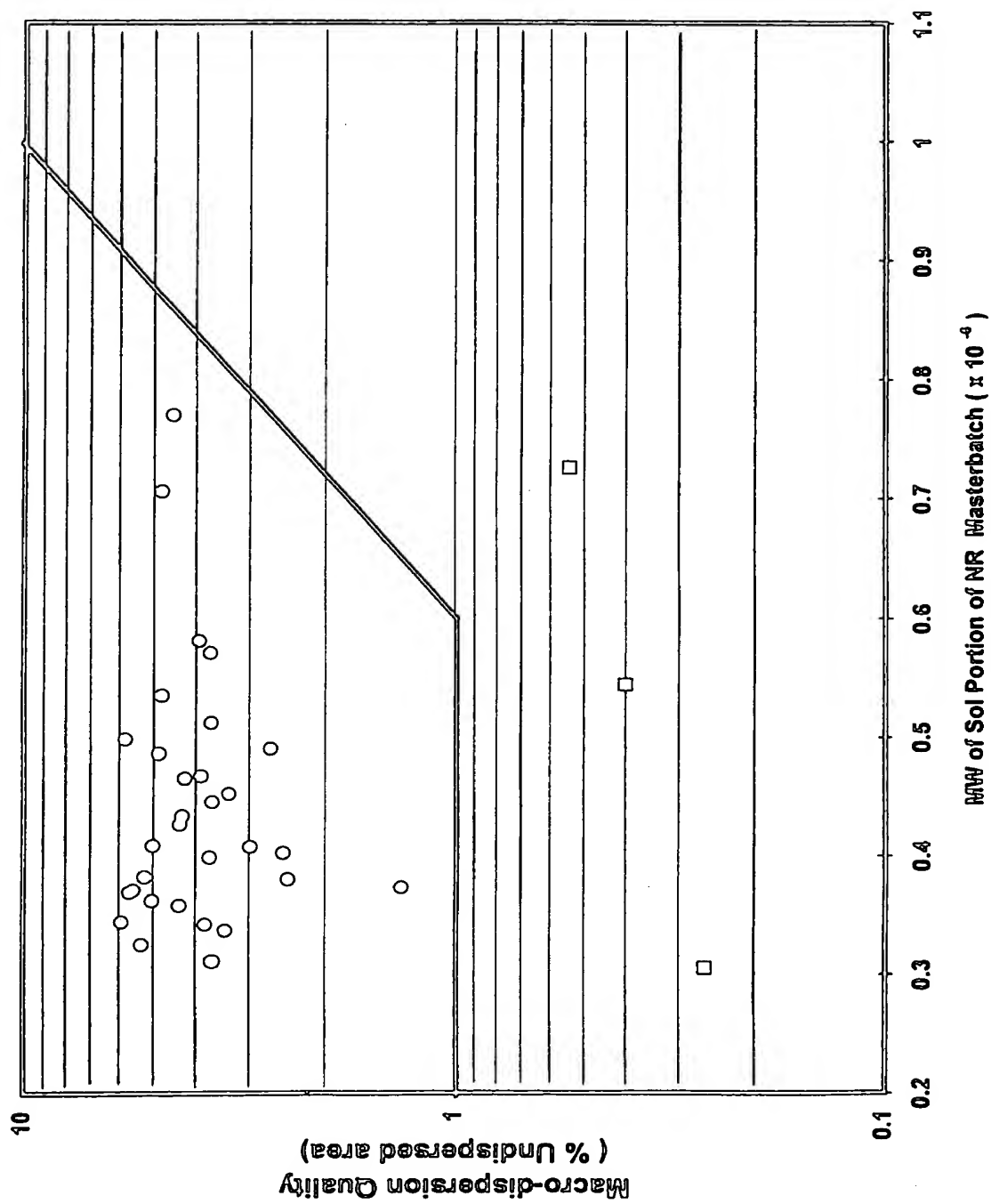


FIG. 12

Dispersion Quality and  $MW_{sol}$  of NR Masterbatch  
(Region III)



**FIG. 13** Dispersion Quality and MW<sub>sol</sub> of NR Masterbatches  
(N330 Carbon Black, 55 phr)



**FIG. 14** Dispersion Quality and MW Sol of NR Masterbatches  
(REGAL 250 Carbon Black)

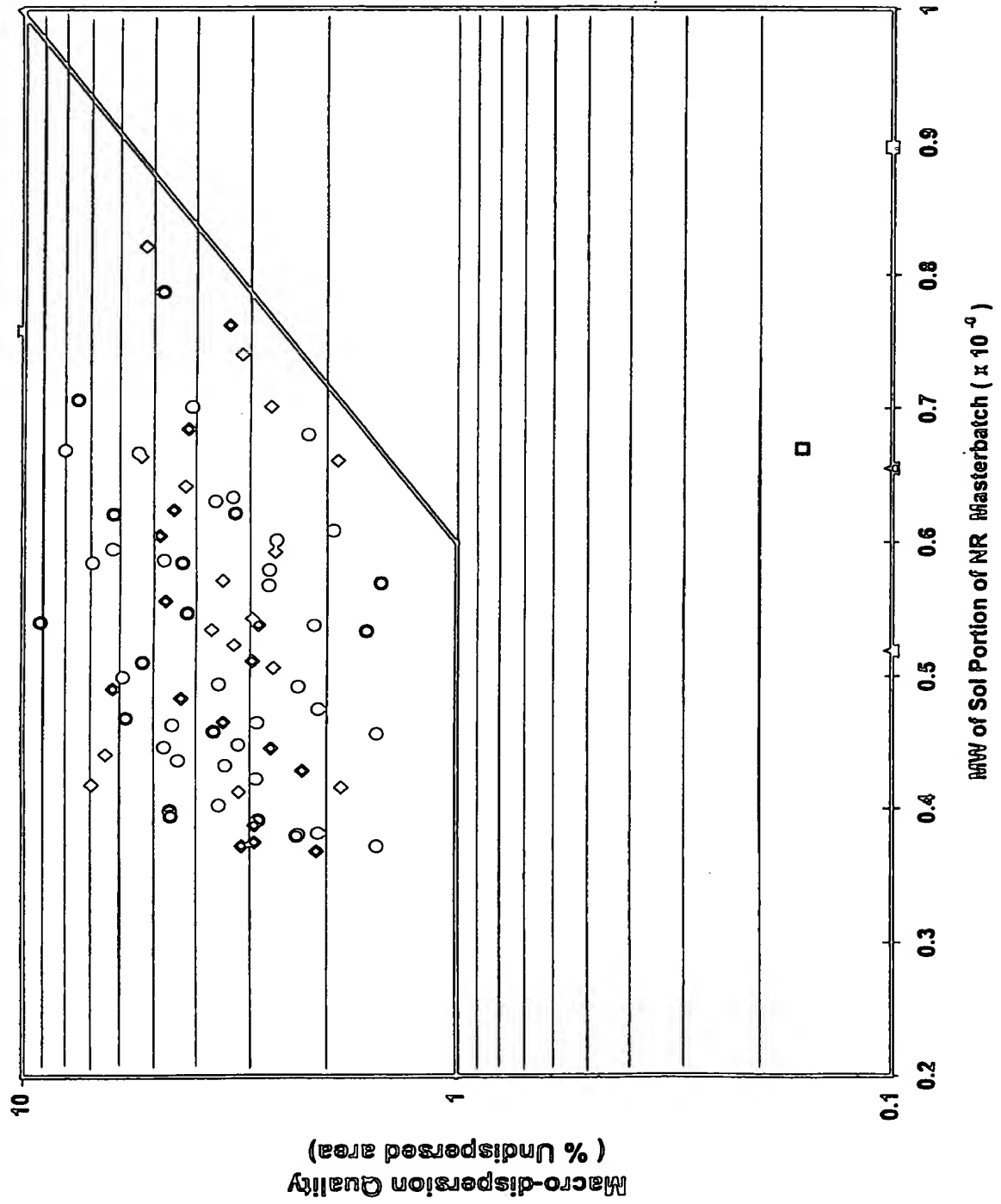
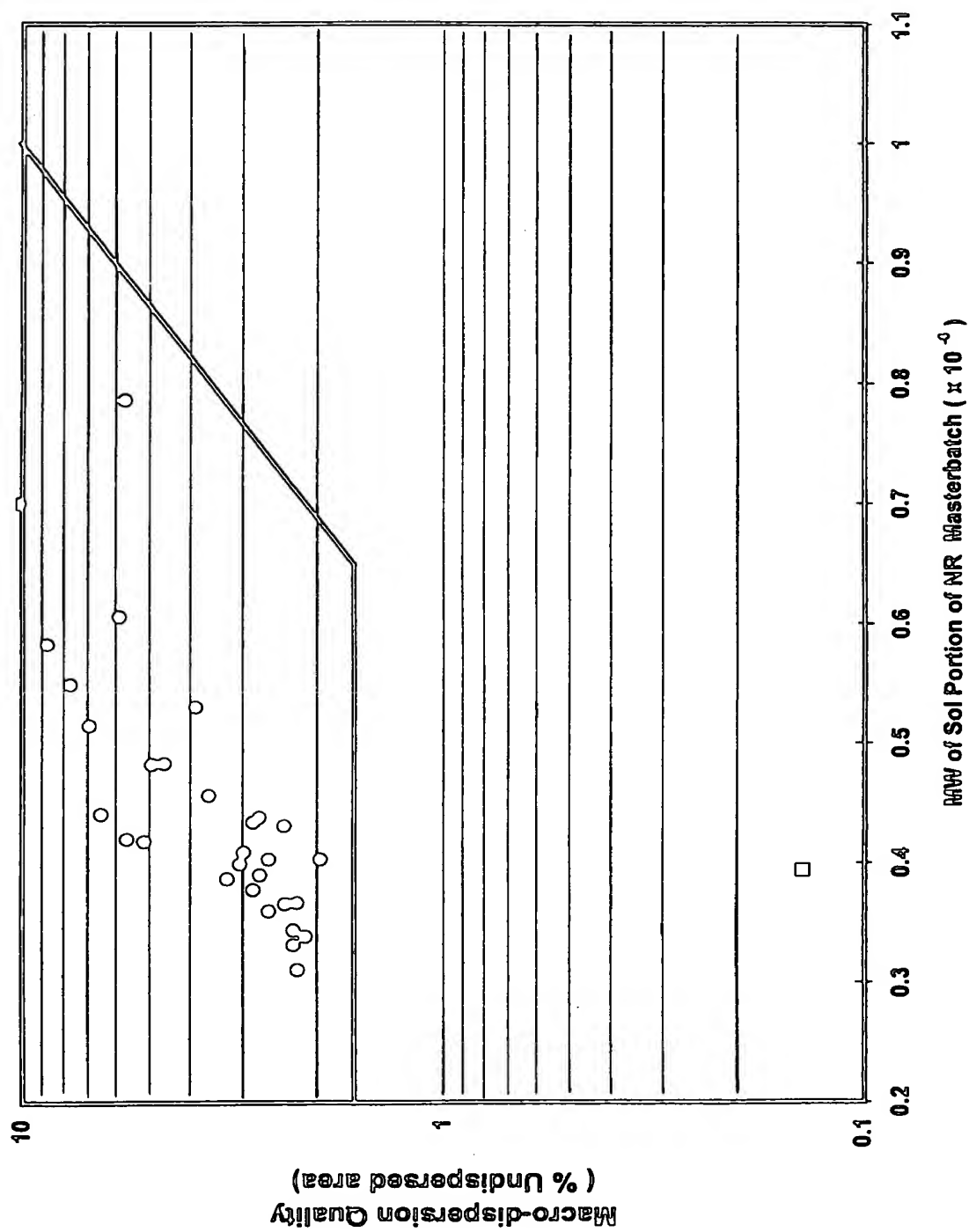
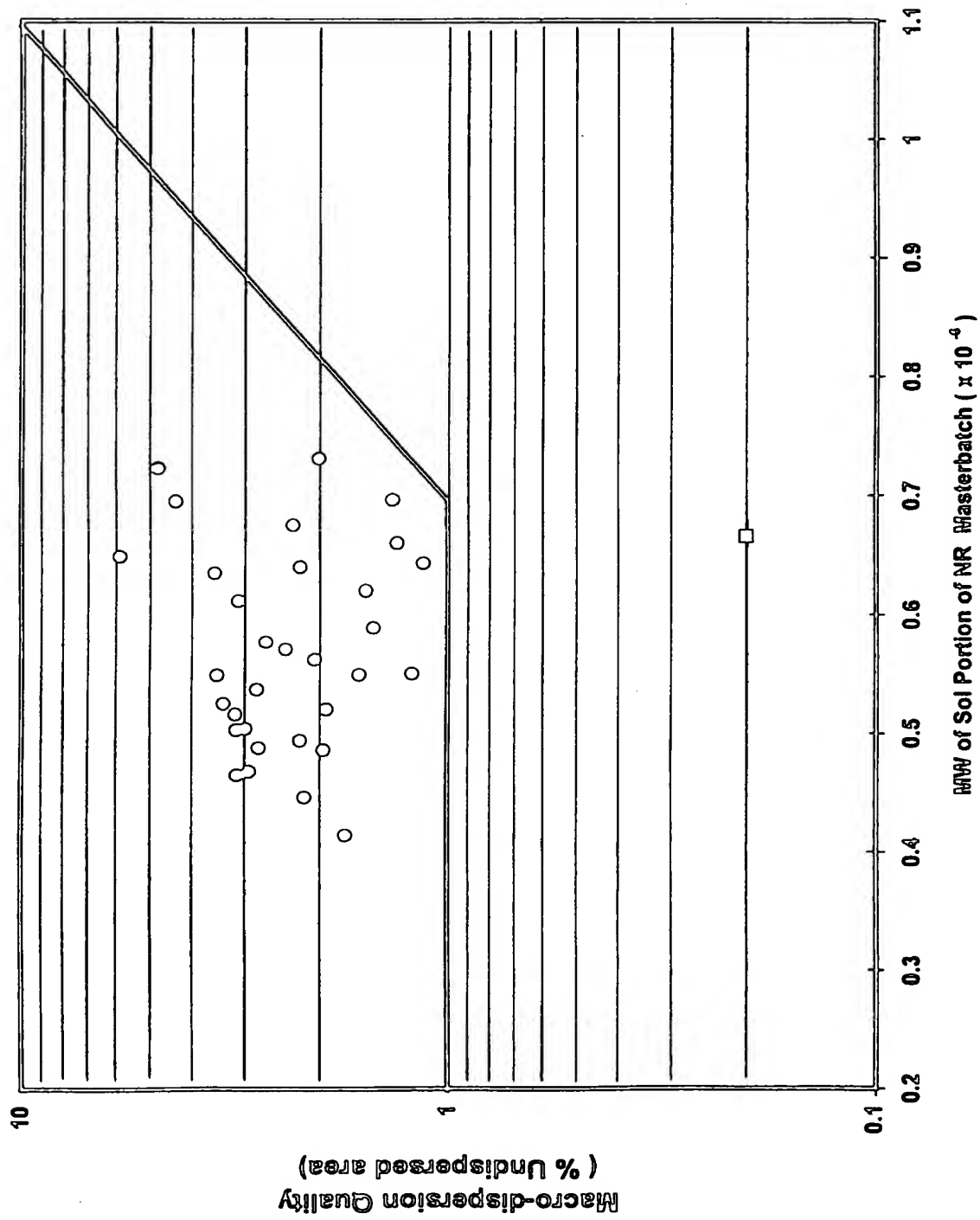


FIG. 15

Dispersion Quality and MW<sub>sol</sub> of NR Masterbatches  
(BLACK PEARL 800 Carbon Black, 55 phr)



**FIG. 16** Dispersion Quality and MW Sol of NR Masterbatches  
(N326 Carbon Black, 55 phr)



**FIG. 17**      Dispersion Quality and MWSol of NR Masterbatches  
 ( REGAL 660 Carbon Black )

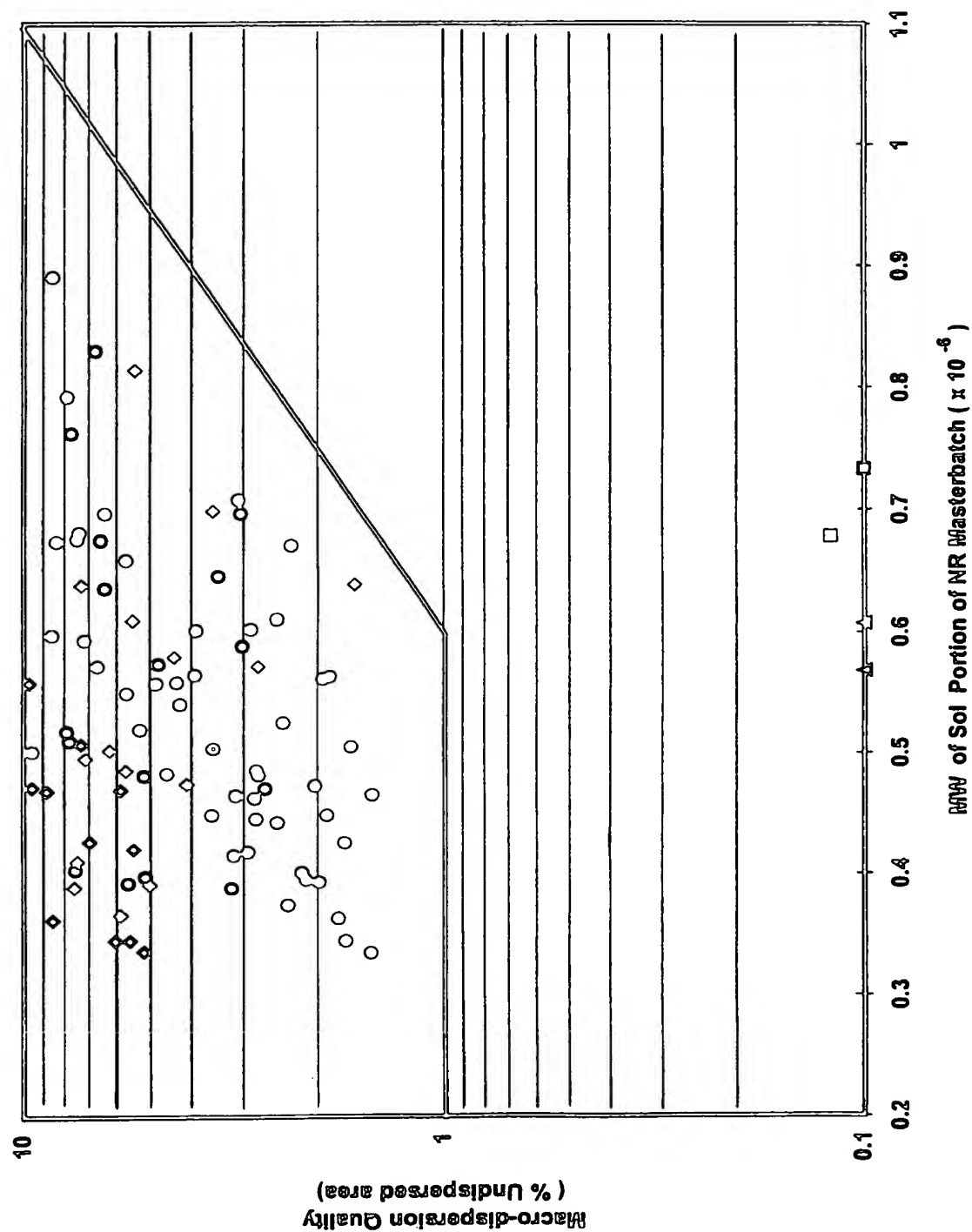
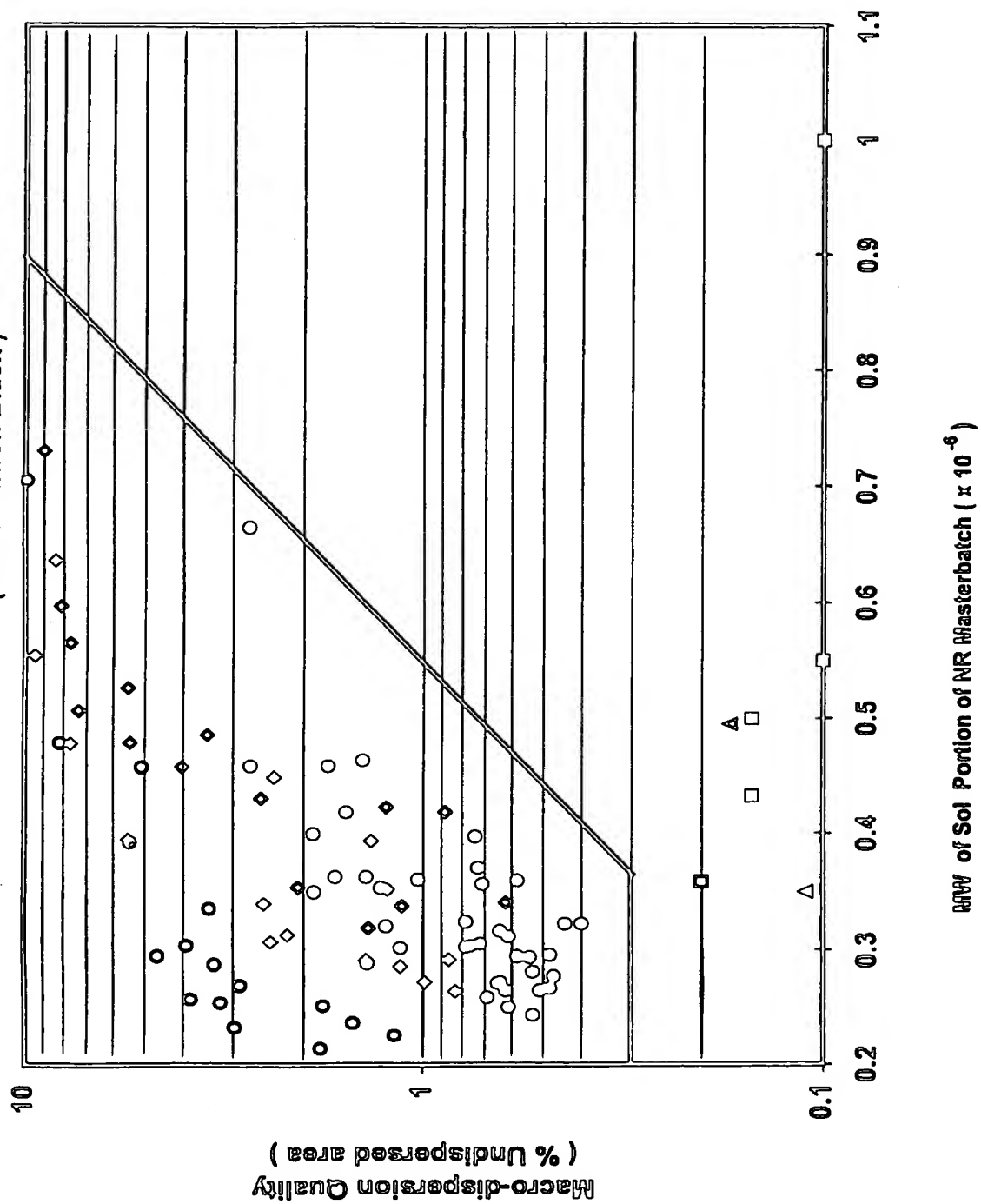




FIG. 18 Dispersion Quality and MW sol of NR Masterbatches  
( N234 Carbon Black )



**FIG. 19 Dispersion Quality and H<sub>90</sub> Sol of NR Masterbatches  
(N110 Carbon Black, 55 phr)**

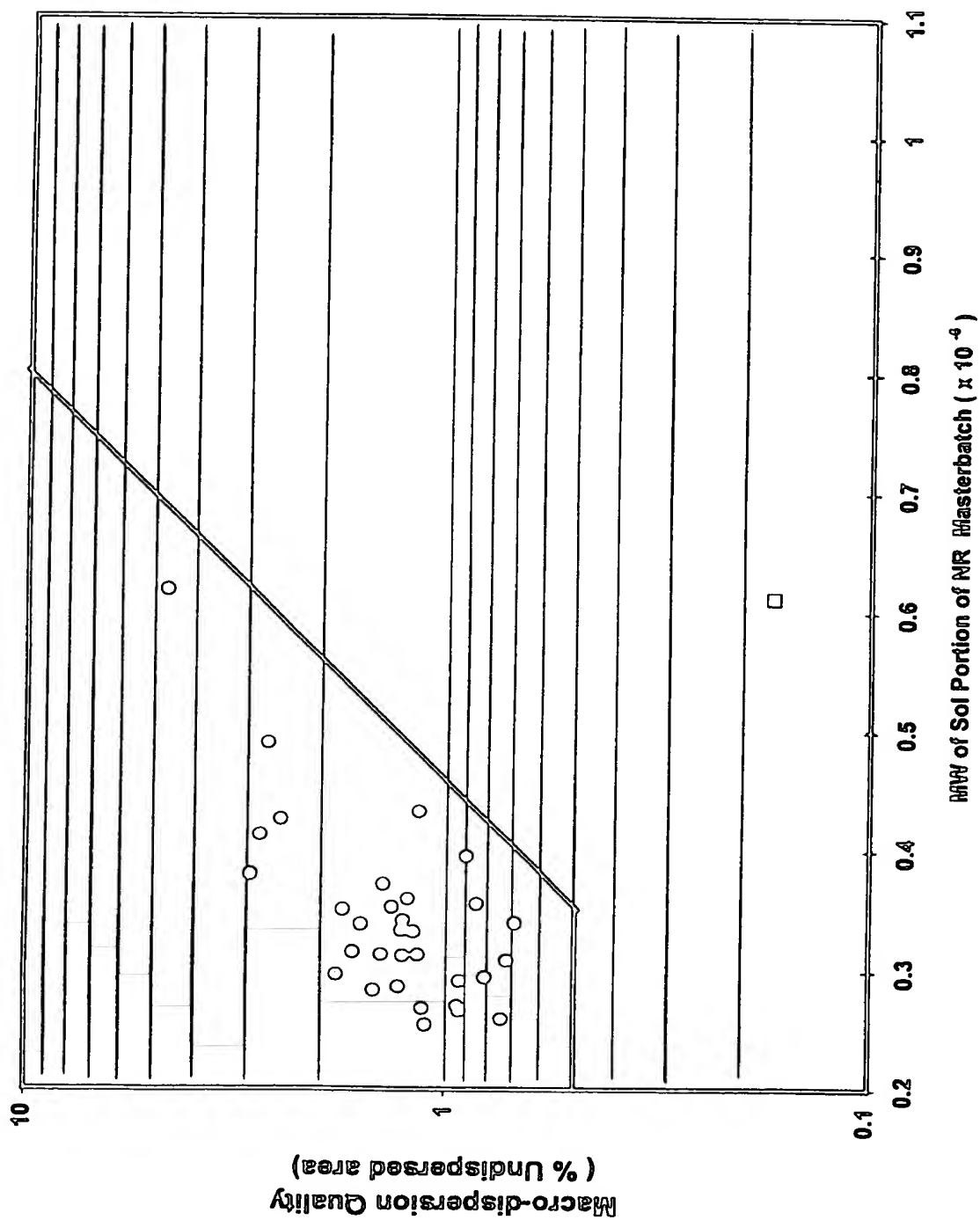
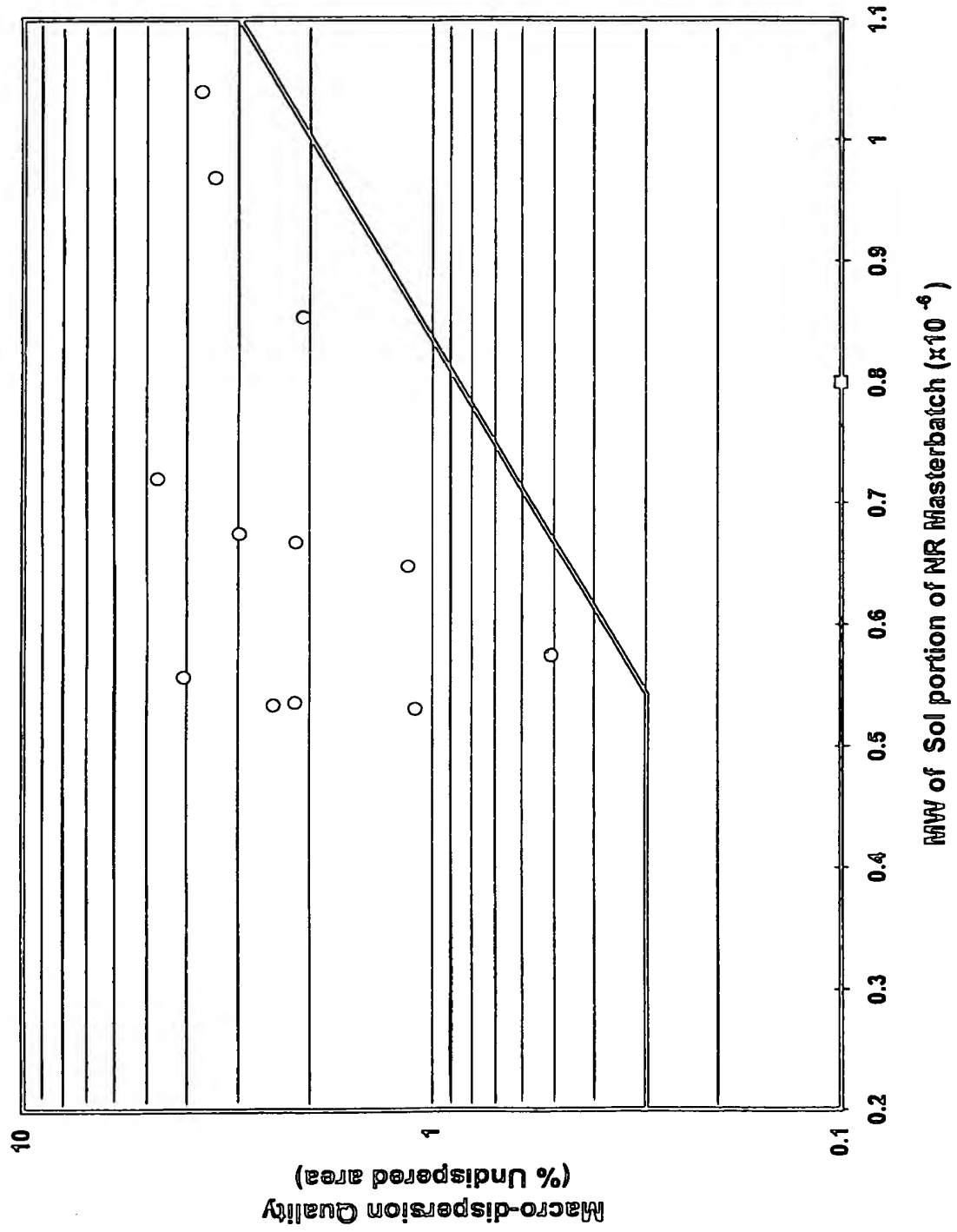


FIG. 20

Dispersion Quality and  $MW_{sol}$  of NR Masterbatch  
( N351 Carbon Black, 33 phr )



**FIG. 21 Dispersion Quality and MW Sol of NR Masterbatches  
(STERLING 6740 Carbon Black, 55 phr)**

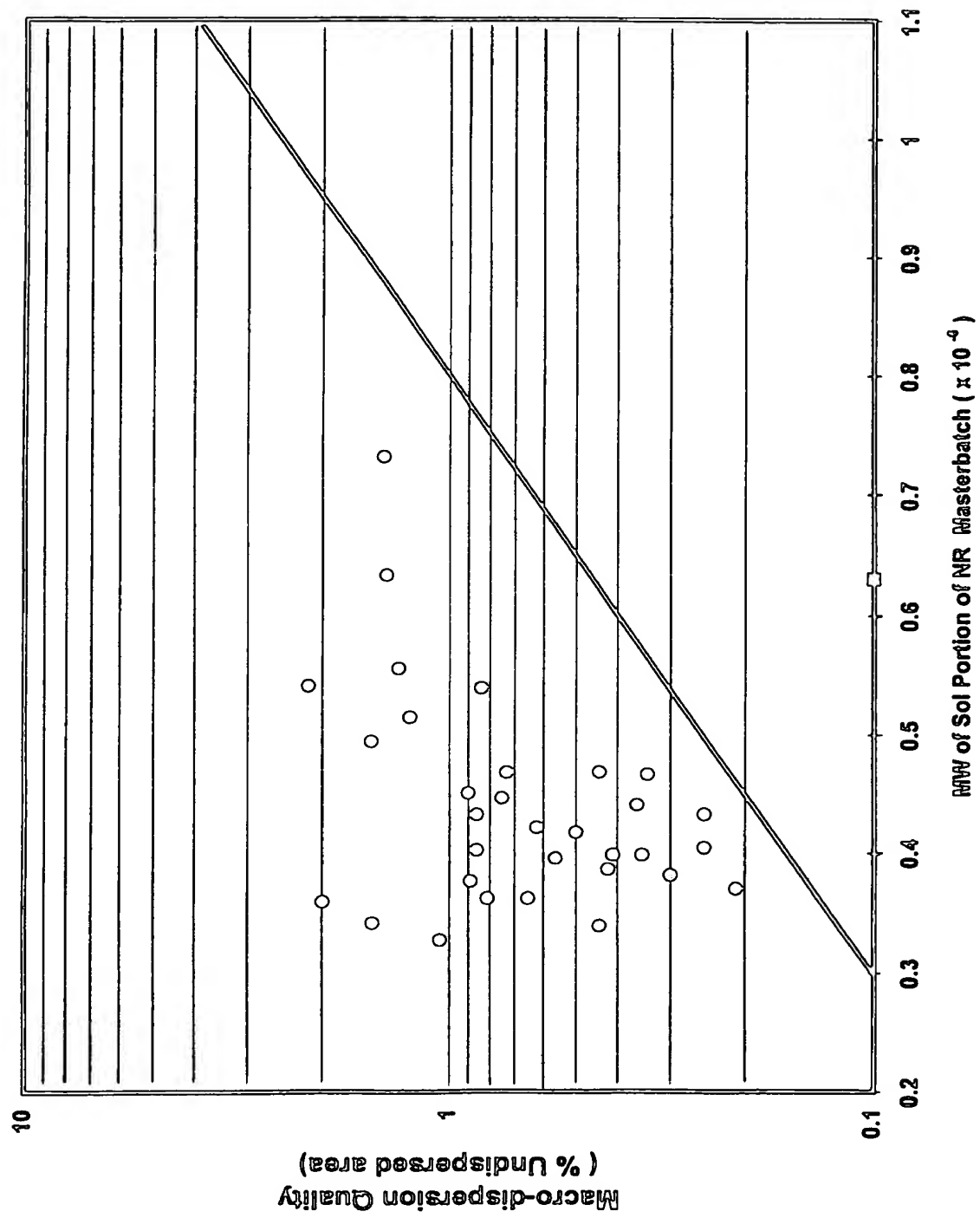


FIG. 22

MW sol Effect on Crack Growth Rate  
(NR Compounds Containing N234 Carbon Black @ 55 phr Loading)

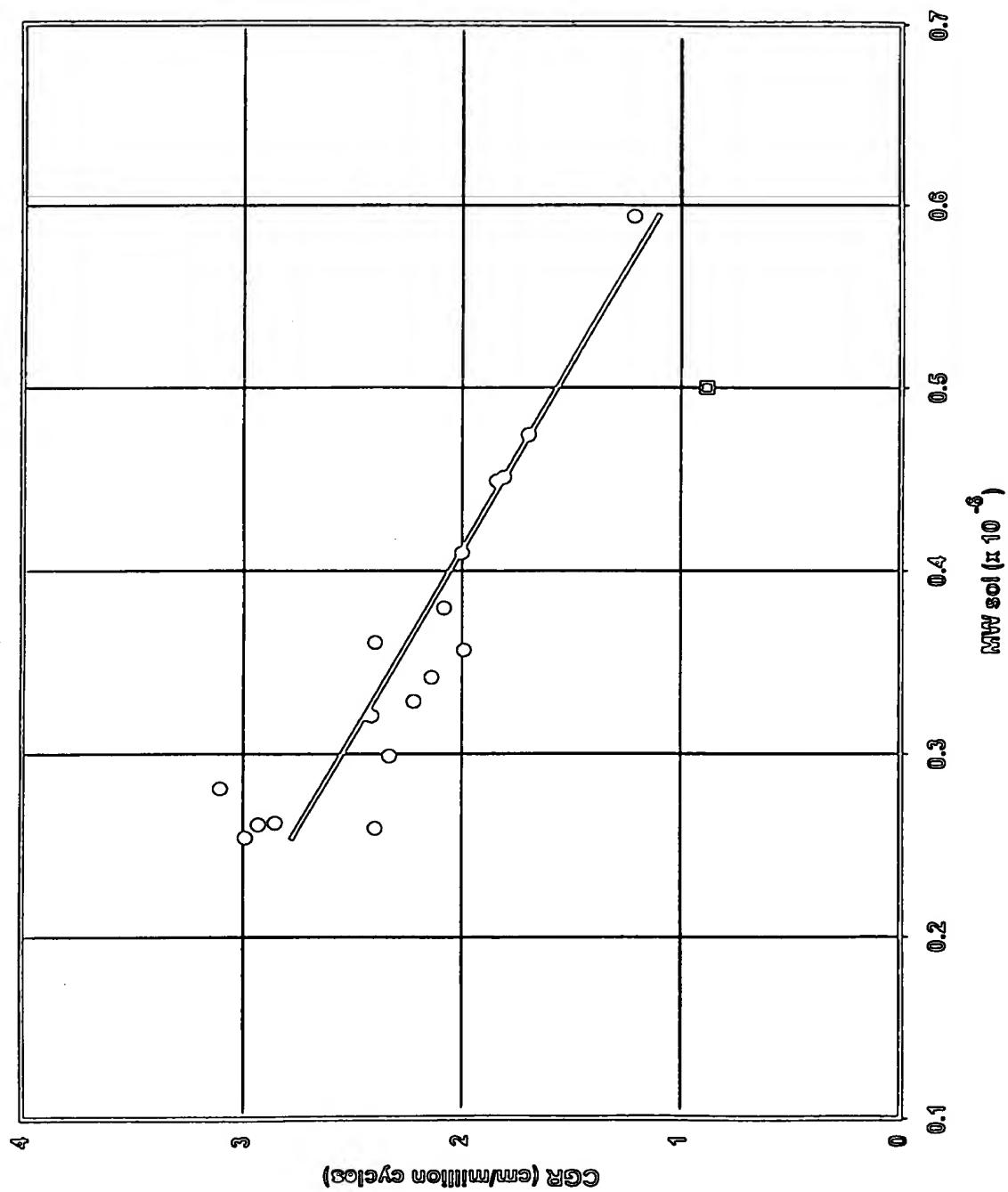


FIG. 23

RAV sol Effect on Crack Growth Rate  
(NR Compounds Containing N326 Carbon Black @ 55 phr Loading)

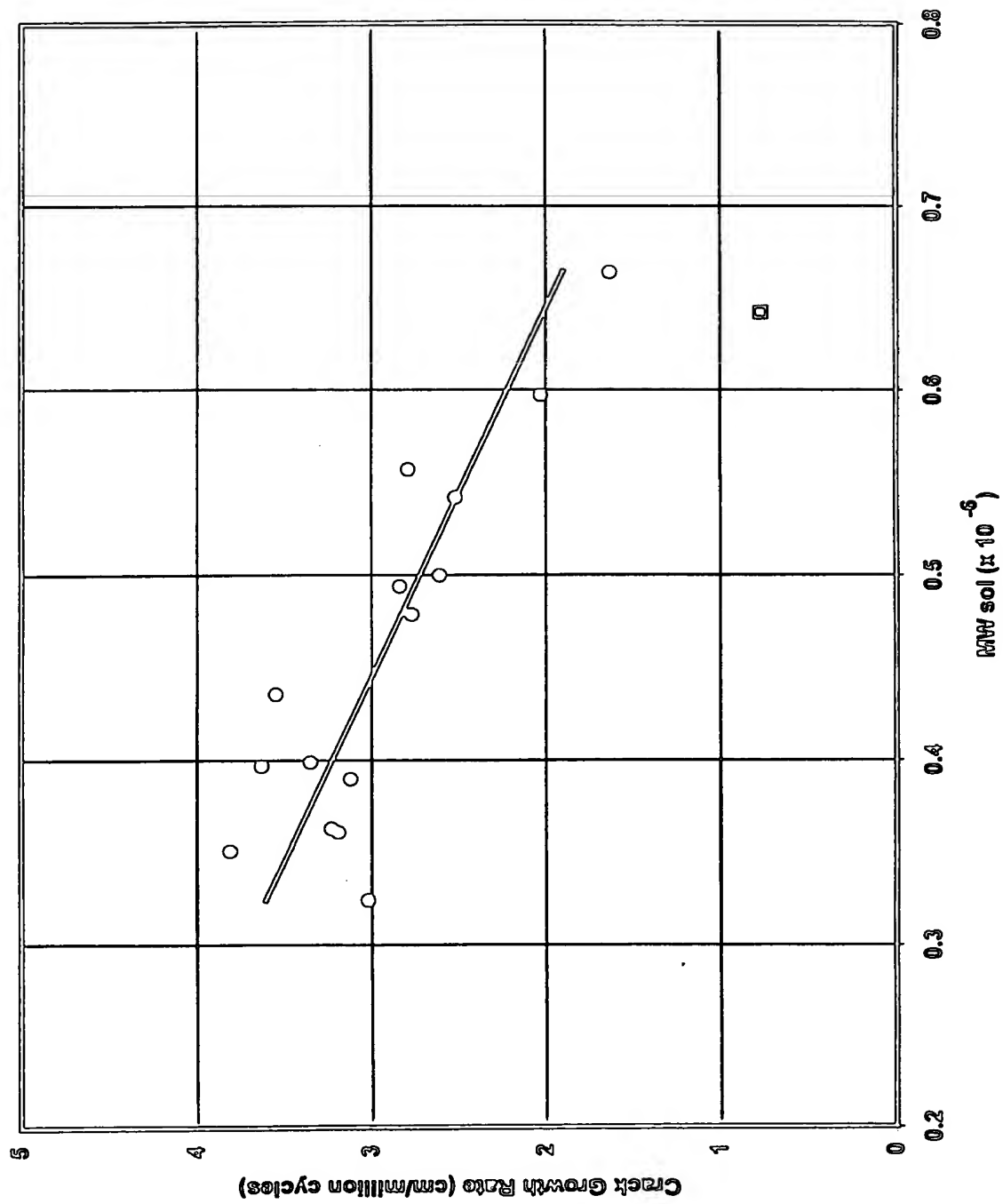


FIG. 24

MW sol Effect on Crack Growth Rate  
(NR Compounds Containing REGAL 660 Carbon Black @ 55 phr Loading)

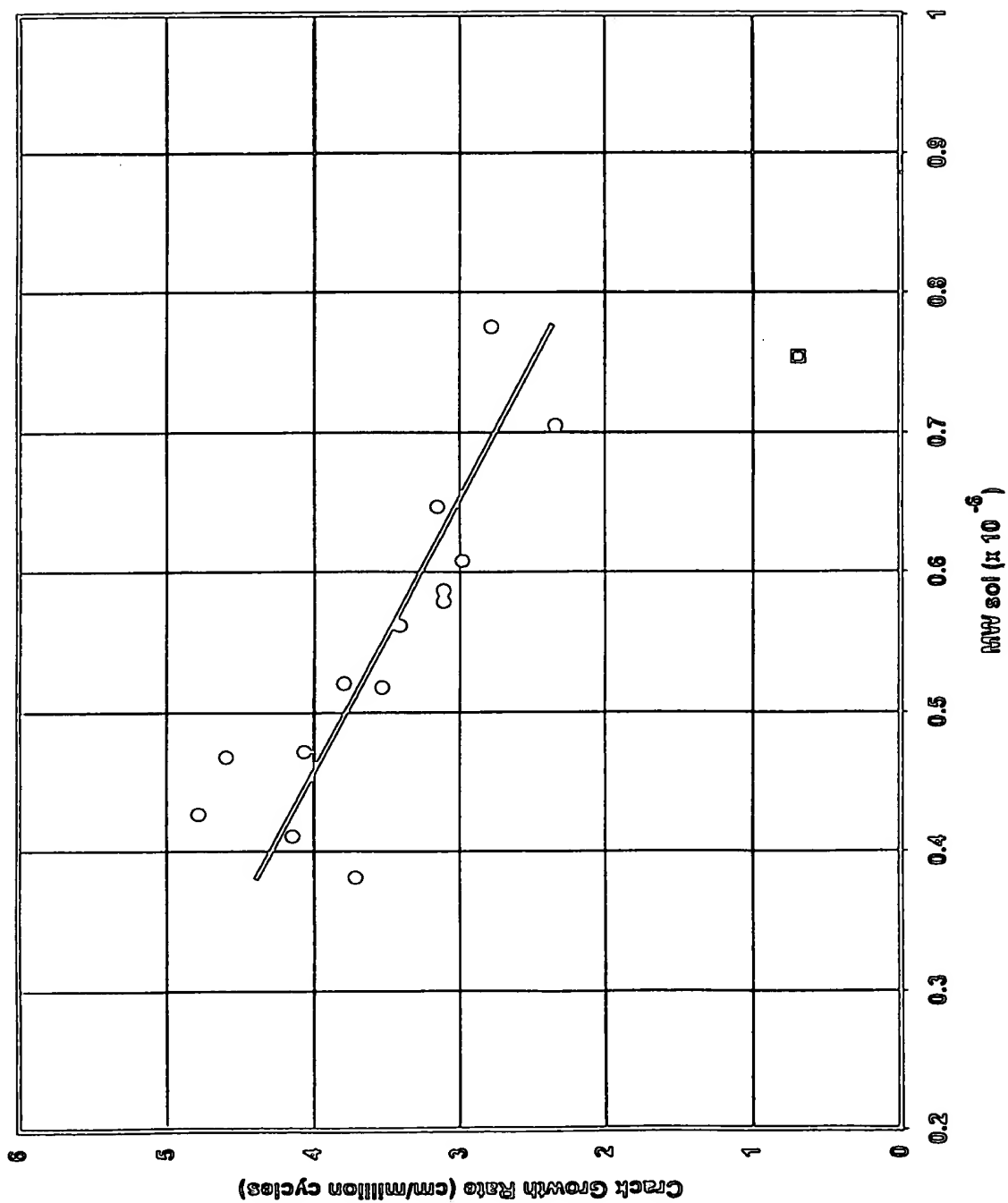
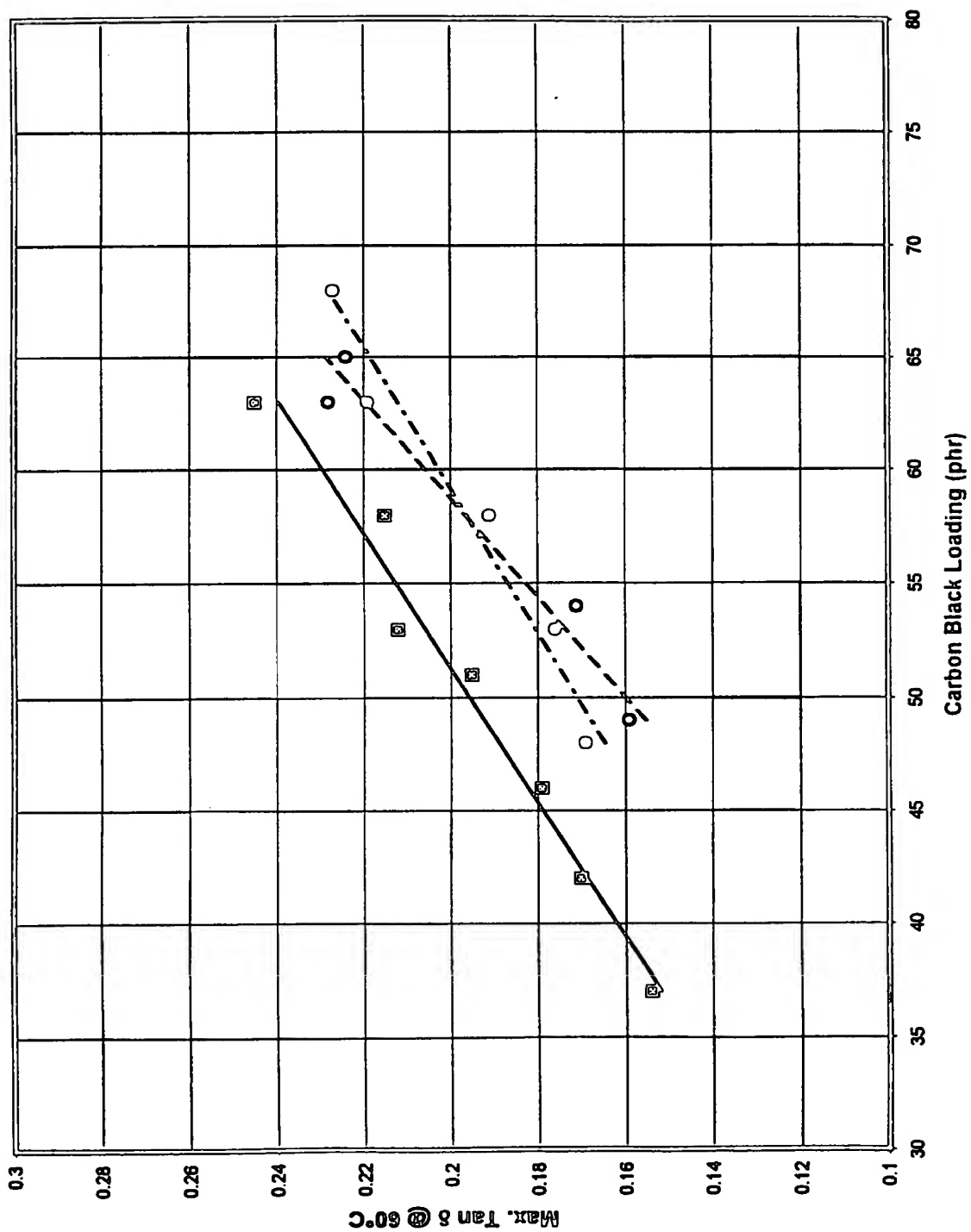


FIG. 25

Max. Tan  $\delta$  (Strain Sweep @ 60°C) of NR Compounds Containing N234  
Black at Different Loadings





**FIG. 26**

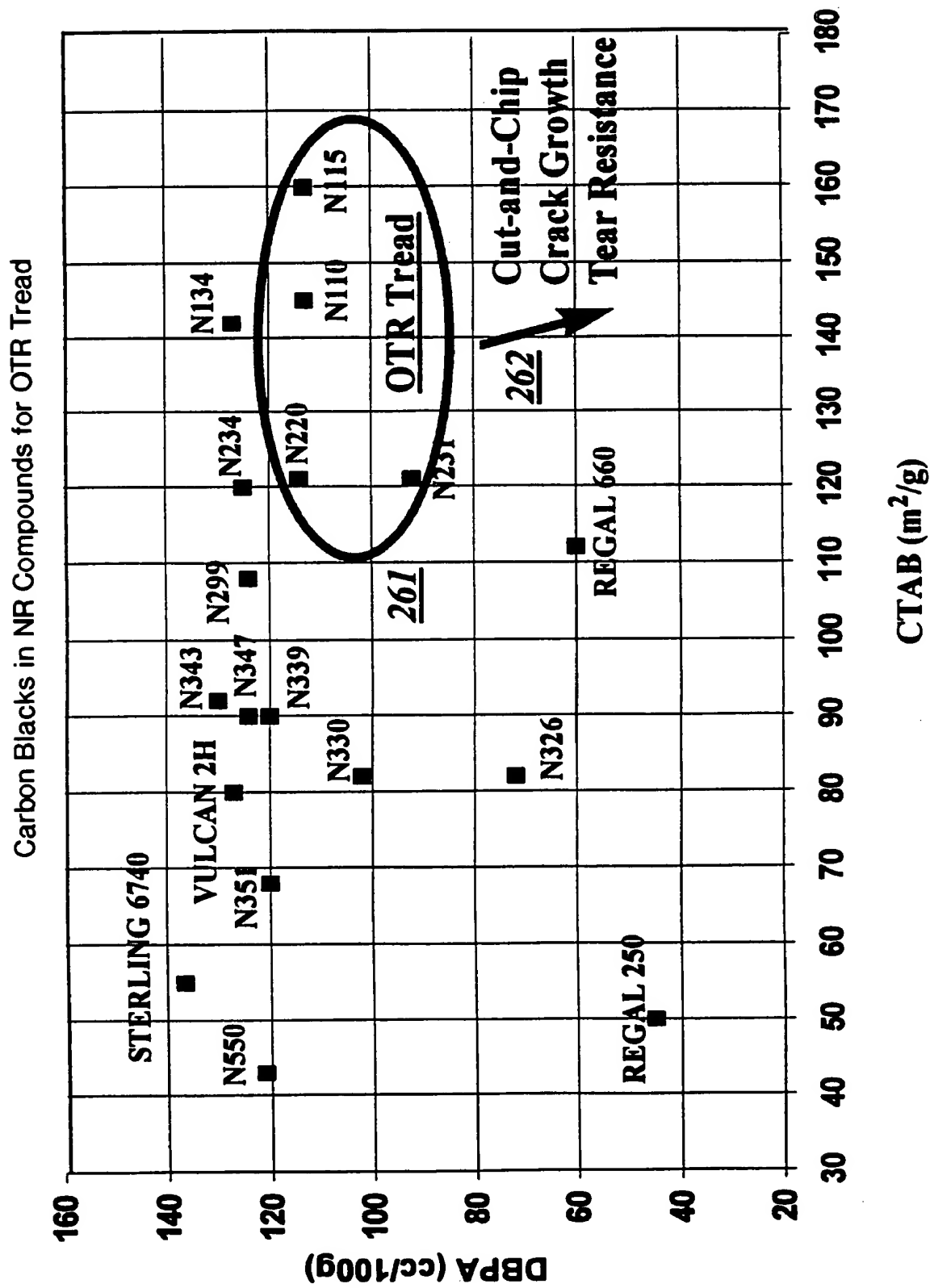
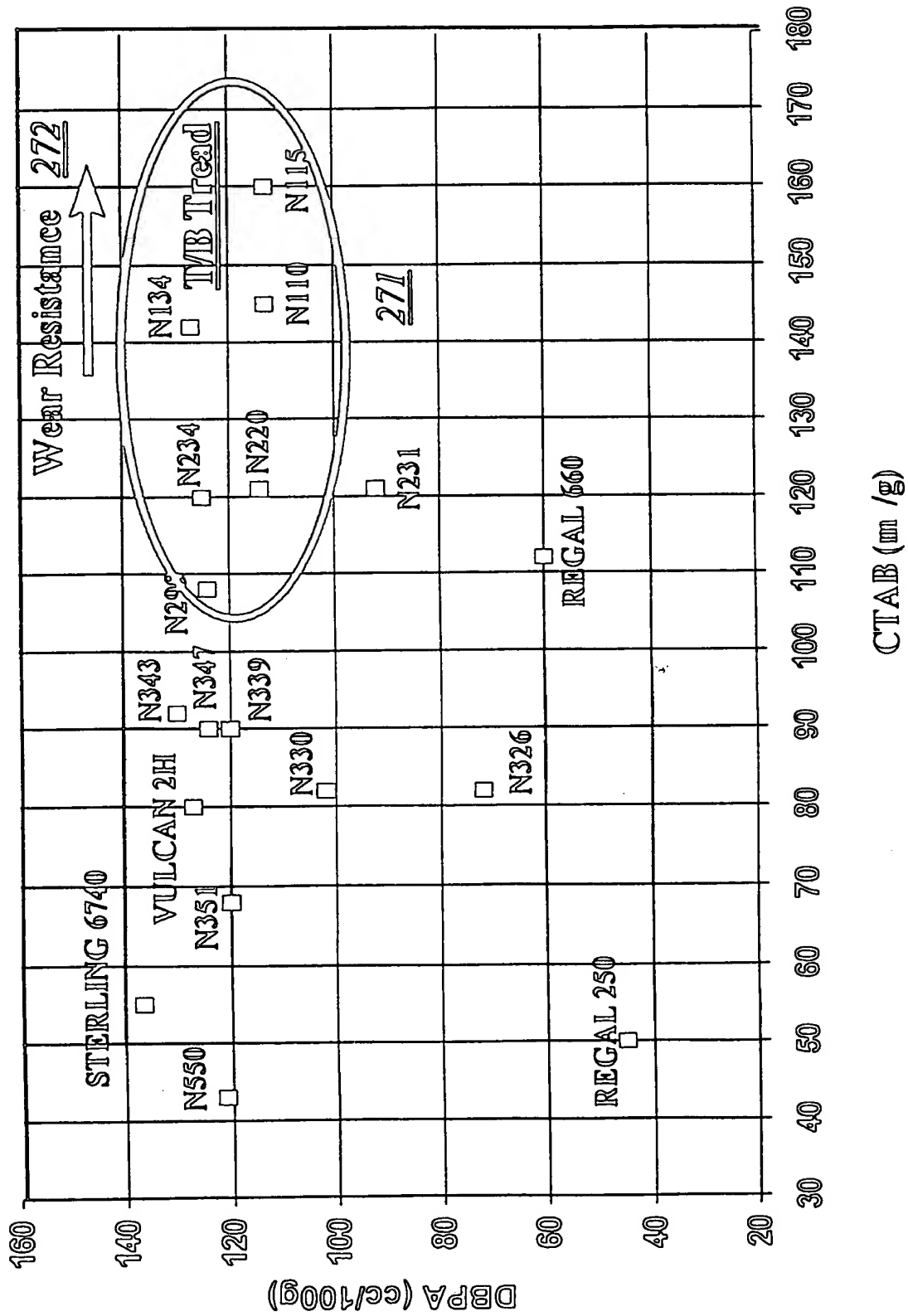


FIG. 27

Carbon Blacks in NR Compounds for T/B Tread



**FIG. 28**

Carbon Blacks in NR Compounds for Tire Applications

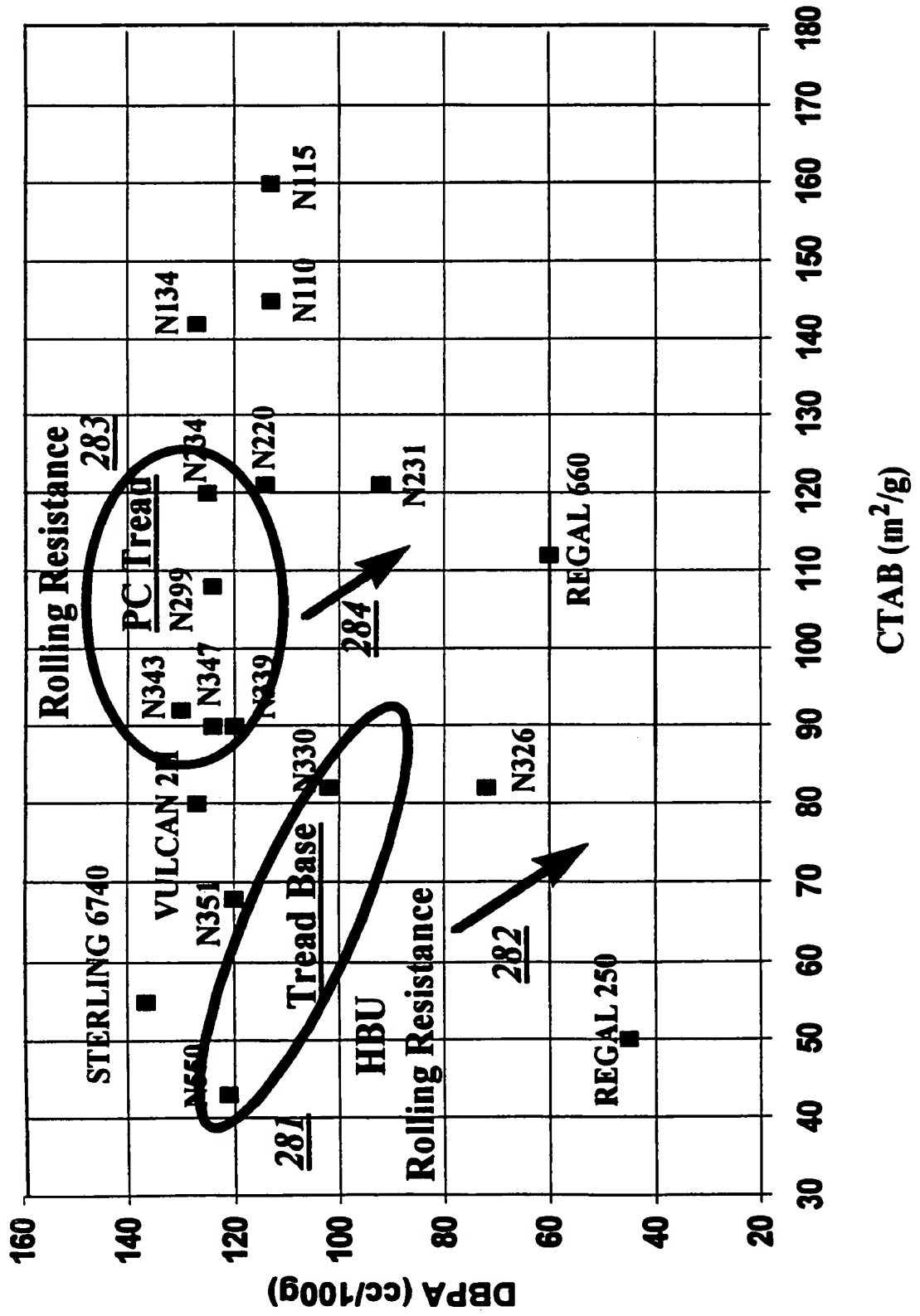
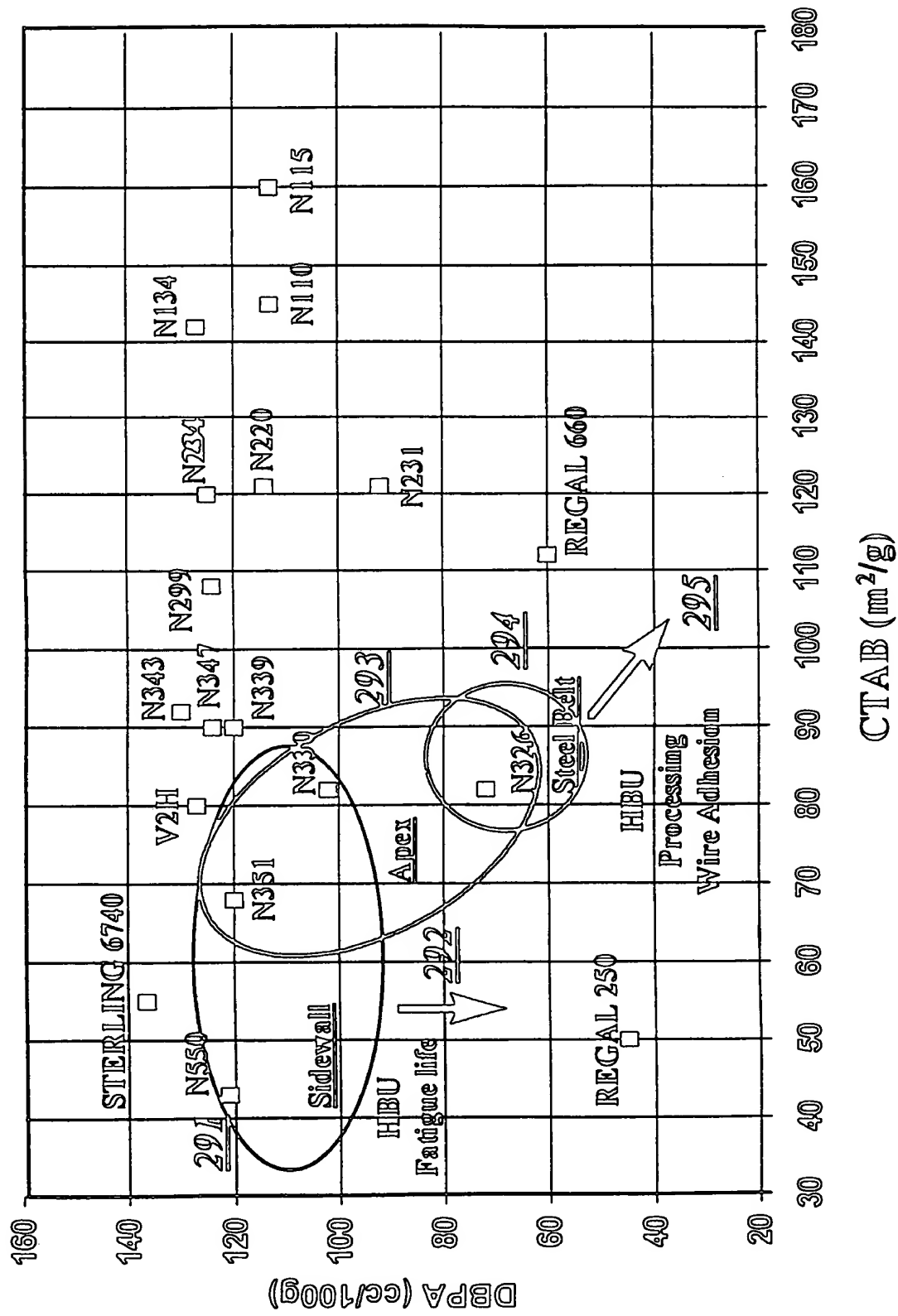


FIG. 29

Carbon Blacks in NR Compounds for Tire Applications



**FIG. 30** Macro-dispersion Quality and MW of Sol Portion of NR Masterbatch Containing Dual Phase (Carbon Black/Silica) Aggregates

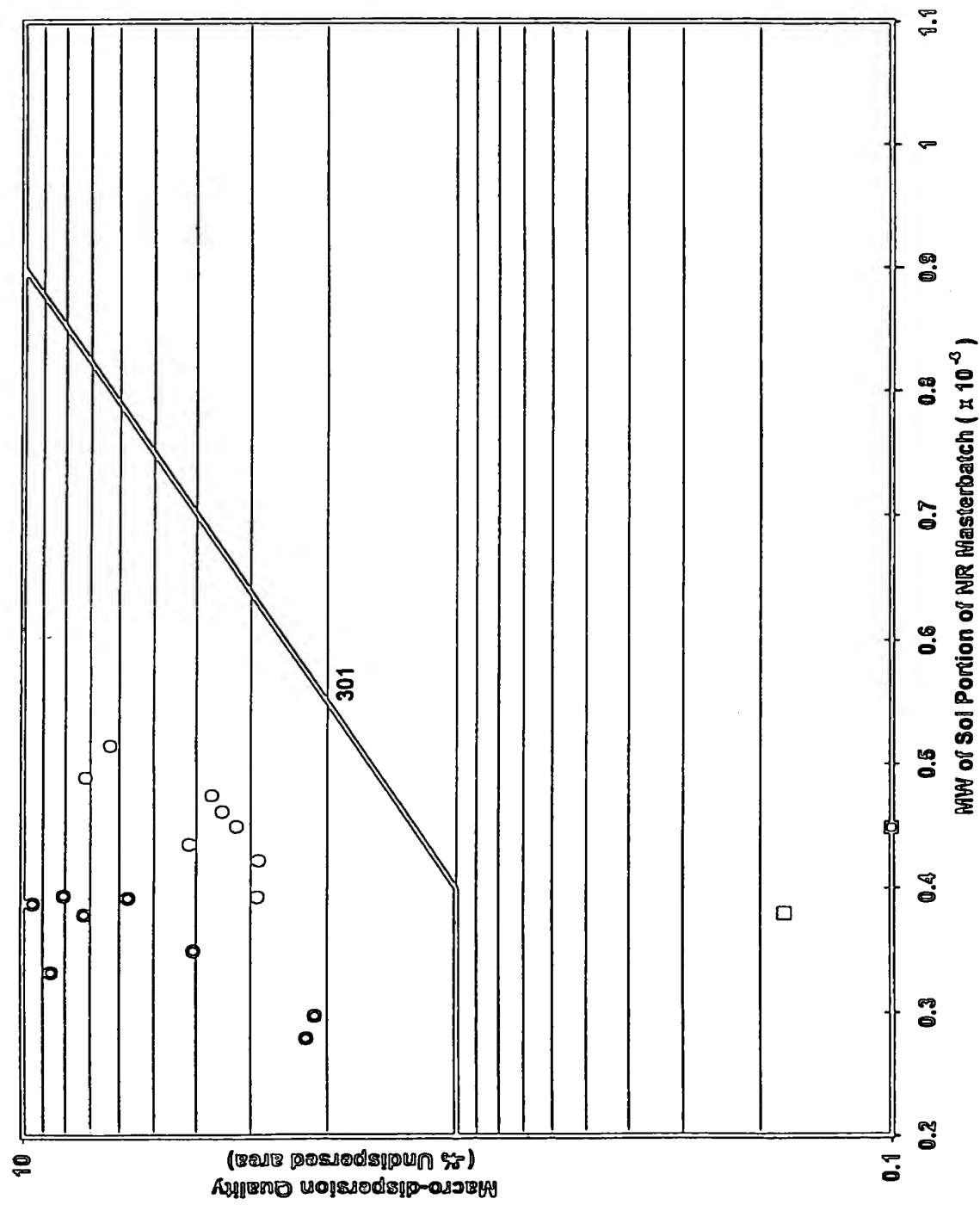


FIG. 31 Macro-dispersion Quality and MW of Sol Portion of NR Masterbatch Containing Blend of Carbon Black and Silica

